

ABSTRACT

Background :

Preterm birth is the leading cause of neonatal morbidity and mortality worldwide and accounts for 75% of neonatal deaths and 50% of long-term morbidity, including respiratory disease and neurodevelopmental impairment.

The incidence of preterm birth range from 5% to 8% in most developed and developing countries, but it is still increasing worldwide.

There is increasing evidence that infection may play a major role in the pathogenesis of spontaneous preterm birth.

The placenta is a very critical organ in explaining the pathogenesis of preterm birth. From this point of view, the placental pathology will be emphasized in two clinical categories of preterm birth: spontaneous preterm birth (SPB) and indicated preterm birth (IPB).

Objectives :

To study gross and microscopic changes occurring in placenta of spontaneous preterm births in order to determine frequency of various lesions.

Methods :

A Retrospective study on the Placental pathology in spontaneous preterm births was carried out in, Government Stanley Medical College, Chennai-1 (50 Singleton pregnancy admitted with preterm labour pains between 28 to <37 weeks of gestation [both preterm labour with intact membrane and preterm rupture of membranes]).

Placenta after vaginal delivery and LSCS are collected and are examined macroscopically and was sent in 10% formalin for histopathological examination.

Main Outcome Measures:

Placenta was examined macroscopically and their amniotic surface, maternal surface, membranes, umbilical cord, weight and abnormalities are noted. Paraffin section were taken and stained with Hematoxylin and Eosin and pathology reports were noted.

Results:

In this study spontaneous preterm births with intact membrane was 62% and PPRM was 38%. Severe prematurity was 24%, moderate prematurity was 34% and late prematurity was 42%. Majority of the placentas were discoid in shape (96%). The mean thickness of the placenta was 2.2 and mean diameter was 19.3. The cotyledons per placenta ranged from 16-24. The commonest type of cord attachment was eccentric in 72%, followed by central in 28%. The mean umbilical cord length was 43.1 The overall infection rate was 52% (26/50 cases). The commonest histological finding overall was chorioamnionitis in 36% (18/50), it was more in PPRM patients (52.6%) than intact membrane (25.8%). 10.5% of PPRM patients had funisitis and chorioamnionitis – indicates severe fetal inflammation.

Conclusion :

Placentas from spontaneous preterm births more commonly show chorioamnionitis. It indicates infection is the more common etiology. Pathological examination of the preterm placenta can provide valuable information concerning the immediate and chronic risks for the infant and risks of chronic diseases in childhood.

Keyword :

Placenta, Preterm, PPRM, Chorioamnionitis